PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 23 February 2001 (23.02.01)	
International application No. PCT/GB00/02825	**Applicant's or agent's file reference** CPW/19660
International filing date (day/month/year) 21 July 2000 (21.07.00)	**Priority date** (day/month/year) 21 July 1999 (21.07.99)
Applicant CLARKE, Paul, Douglas	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

10 January 2001 (10.01.01)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer Olivia TEFY
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

Form PCT/IB/331 (July 1992)

GB0002825

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 January 2001 (25.01.2001)

PCT

(10) International Publication Number
WO 01/05226 A1

(51) International Patent Classification[7]: A01N 31/06

(21) International Application Number: PCT/GB00/02825

(22) International Filing Date: 21 July 2000 (21.07.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9917040.9 21 July 1999 (21.07.1999) GB

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(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *With international search report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/05226 A1

(54) Title: ANTISEPTIC COMPOSITION

(57) Abstract: p-Menthane-3,8-diol (PMD) has antiseptic, antibiotic, fungicidal and bactericidal properties. It is used for these purposes in the form of compositions comprising the PMD and a carrier.

INTERNATIONAL SEARCH REPORT

Interr. ial Application No
PCT/GB 00/02825

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A01N31/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, EPO-Internal, PAJ, CHEM ABS Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 282 534 A (CLARKE PAUL DOUGLAS) 12 April 1995 (1995-04-12) cited in the application the whole document	1-25
A	NISHIMURA, HIROYUKI ET AL: "Microbial transformation of monoterpenes: flavor and biological activity" ACS SYMP. SER. (1996), 637(BIOTECHNOLOGY FOR IMPROVED FOODS AND FLAVORS), , pages 173-187, XP002148480 the whole document	1-25

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
4 October 2000	20/10/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Bertrand, F

2

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INTERNATI .L SEARCH REPORT

Information on patent family members

Inter ial Application No
PCT/GB 00/02825

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2282534 A	12-04-1995	NONE	

ANTISEPTIC COMPOSITION

The present invention relates to an antiseptic composition.

It is known that a number of natural products have insect repellent properties. Citriadora oil obtained from various species of eucalyptus is one example of such a natural product, citronella oil which is obtained from certain grasses is another. We have previously investigated certain insect repellent natural products and have found that the insect repellent properties are in a fraction rich in p-menthane-3,8-diol (PMD). This is described in our GB-A-2282534. In GB-A-1315625, there is described the use of certain p-menthane diols, but not PMD, to provide a physiological cooling effect.

We have now found, very surprisingly, that PMD not only has the insect repellent properties we have previously described, but also possesses the totally unrelated quality of antiseptic properties. Thus, we have observed antiseptic activity of the compound against certain microbes and, in particular and most importantly, against two strains of multiply resistant *Staphylococcus aureus* (MRSA). It appears, therefore, that PMD will have general antiseptic utility and be particularly useful, at least in respect of certain microbes, as a bactericide as well as being fungicidal and capable of acting as an antibiotic.

According to one aspect of the invention, we provide the use of PMD as an antiseptic. According to a further aspect of the invention, there is provided the use of PMD as an antibiotic. According to a further aspect, the invention provides the use of PMD as a fungicide and/or bactericide

The PMD for use in the present invention may be derived from a natural source or may be synthetic, or a mixture of the two. A preferred source of natural PMD is the lemon eucalyptus plant. Synthetic PMD may be obtained by any route, for example, such as described by Zimmerman and English in J.A.C.S. 75 (1953) pp 2367-2370.

The PMD for use in the present invention may be a substantially pure form of the compound, or a crude extract, for example from a natural source. An example of a crude extract is a PMD-rich extract derived from lemon eucalyptus. The PMD can be produced by cyclisation of citronellal which is present in high concentration in lemon eucalyptus oil (approximately 75% by weight). We have obtained a PMD-rich extract from the lemon eucalyptus oil which includes both geometric isomers of PMD usually at about 64% by weight. The crude extract also includes citronellol and isopulegols plus certain other minor components.

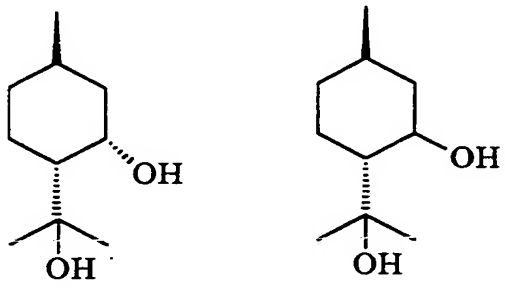
According to a further aspect of the invention, there is provided the use of a PMD-rich extract containing composition, which extract is derived from natural lemon eucalyptus oil, as an antiseptic. We market this crude extract under the trade mark "Citriodiol".

It is known that eucalyptus oils include certain components, such as cineoles, which are known to have antiseptic properties. For the avoidance of doubt, we make no claim to the antiseptic activity of any component, other than PMD when it is derived from a natural source.

A composition for use in accordance with the invention can comprise PMD and a carrier. PMD is poorly soluble in water, so that it is

preferred to use an oil as a carrier, or use a solvent, such as alcohol, for water-based compositions.

It is known that PMD exists in two geometric isomeric forms, namely the cis and trans isomers, and that there are two enantiomers for each geometric isomer.



trans cis

Our experimental work is based on a substantially pure racemic optical mixture of the cis isomer. It is, however, understood that the claimed activities for PMD are common to all its isomeric forms.

In a further aspect of the invention, the composition for use in the invention comprises only one of the isomers of PMD, with a carrier therefor.

It is a further aspect of the invention that the relative amounts of cis:trans PMD isomers in the compositions for use in the present invention are varied as desired. This can be done by mixing previously separated isomers in the appropriate ratio, or by adjusting the ratio in a mixture of naturally occurring or synthetic source.

In tests we have found that PMD is effective against certain strains of MRSA. In a further aspect, therefore, the invention provides the use of PMD against MRSA.

The uses of the present invention may be adopted in sanitizing a surface, for example in a hospital room or ward. In such cases PMD is applied to the surfaces. The PMD is preferably either in solution or as an emulsion in suitable liquid carriers. Most desirably, the PMD is formulated for spray

application. For example, the PMD or Citriodiol can be dissolved in a suitable solvent or solvent mixture. In a particularly preferred mode of application, the spray is an electrostatic spray. For electrostatic spraying, the solvent or solvent system will need to be appropriate for electrostatic spraying, as will be clear to those skilled in the art. I prefer to use a mixture of conductive and non-conductive solvents to achieve a sprayable solution with the appropriate electrical resistivity for the spray nozzle in question, but suitable single solvents can of course be used. Charged particles of the composition including PMD are projected as a fine mist and because all the particles carry a similar, for example positive, charge they repel each other, but are attracted to an oppositely charged surface. By this means of spraying, a very good coverage of the composition on the surface may be obtained. Devices for electrostatically spraying the composition for use in the invention will be known to the person skilled in the art.

A spray may also be used, for example, for dispensing a composition including PMD onto a hand (or other part) of a person. The actuation of the dispenser may be by means of an infra-red sensor, for example, so that the person need not contact a surface, and thereby risk the transfer of microbes to or from their hand. Electrostatic spray application to a hand may be used, with advantage, where a substantially uniform coverage of antiseptic is particularly important e.g. to a surgeon during "scrubbing up" before surgery. To increase the likelihood of the charged particles covering the skin surface, desirably the electrostatic spray nozzles may be arranged to spray into the interior of a cabinet or container as the hand is introduced therein.

The liquids for applying to a surface, by spraying or otherwise, in accordance with the invention may contain, apart from the solvent(s) and/or other liquid carrier(s), other components as necessary or desirable for the intended purpose. Thus, second or further antiseptics may be included, as may surfactants, fragrances etc. In general, the compositions may be identical to

known compositions for the purpose except that they contain PMD in addition to, or in whole or part substitution for one or more of, the other ingredients. The amount of PMD can vary widely, the greater the amount the greater the effect. We prefer to use up to about 5% by weight of the composition, in general.

PMD may also be included as a component in household detergents, cleansers and creams, for example, washing powders or conditioners and hand gels.

Again, the PMD may be included in what are otherwise standard or known compositions for the purpose concerned. The PMD may be an extra ingredient or in partial or complete replacement of a standard ingredient. The compositions may already contain an antiseptic and the PMD is added to give an extra antiseptic effect.

Furthermore, PMD may be impregnated into household objects which may be prone to microbial infestation and so risk infecting inhabitants, e.g. dishcloths, plastic soap dishes, surfaces used for the preparation of food. For these purposes, the PMD may be included during manufacture of the object, e.g. in mixtures for plastics mouldings or the like, or it may be applied to the object after manufacture, e.g. by soaking dishcloths in PMD. The presence of the PMD at the surface of the object will provide the desired antiseptic effect. This is particularly useful for work surfaces, although of course such surfaces can also be regularly treated with PMD as by spraying or otherwise.

A composition including PMD can also be used in medicine. For example, it can be applied to broken skin, or to internal mucous membranes. It may be an ingredient in throat lozenges or pastilles or other products for ingestion. In this aspect, the invention provides PMD for use as an antiseptic, antibiotic, bactericide or fungicide. In medical uses the PMD may be formulated with the carrier as a cream, or, as mentioned above, as a throat

lozenge or pastille. One cause of dandruff is known to be of fungal origin. PMD may be included as an ingredient in an anti-dandruff shampoo in order to combat the scalp infection, and indeed in non-medicated shampoos and the like. A further specific medical use is based upon the fact that many carriers of staphylococcus bacteria carry the bacterium in their nasal passages. A composition including PMD may be applied to the accessible inner surfaces of the nose in order to control or eliminate bacteria which may cause regular systemic effects. Another specific medical use is in wound irrigation during surgery, e.g. surgery conducted on the peritoneal cavity.

As will be evident to those skilled in the art, there are a very large number of medical uses of PMD not only as an antiseptic but also as an antibiotic, fungicide and bactericide. In general, new formulations for these purposes are not required: it is adequate and satisfactory to take a known or standard composition and include the PMD therein. Alternatively, one or more ingredients may be replaced by the PMD as appropriate. Those skilled in the art will well know the make-up of the various compositions and no further particular description thereof is given here.

PMD is the active ingredient in our "Mosiguard" ™ insect repellant. We have conducted tests to show regulatory authorities that PMD is not toxic, and we have marketed our insect repellent for several years and there has been no report of any significant toxicity thereof. Potentially, therefore, the medical uses of PMD may be topical or systemic. Systemic administration may be by way of an oral dosage form or by a parenteral route, such as by intra-venous injection.

In a further aspect, the invention provides the use of PMD in the manufacture of an antiseptic, antibiotic or fungicidal medicament.

In general, PMD is used in accordance with the invention in a wide variety of vehicles, depending on the particular use intended. The vehicles may, for example, include solids, liquids, emulsions, foams and gels.

Typical vehicles include aqueous or alcoholic solutions, oils, fats, fatty acid esters, long chain alcohols and silicone oils, finely divided solids such as starch or talc, cellulosic materials and aerosol propellants. Topical compositions include perfumes, powders and other toiletries, lotions, liniments, oils and ointments, for example. Toiletries generally include after shave lotions, shaving soaps, lipstick, creams, foams, toilet water, deodorants, antiperspirants, solid colognes, toilet soaps, bath oils and salts, shampoos, face and hand creams, cleansing tissues, mouthwashes, eye drops, for example. Medicaments and allied compositions include, for example, ointments, lotions, decongestants and throat lozenges.

The amount of PMD present in the compositions will be selected to give the desired effect but we believe that generally from 0.5 to 5% by weight will be satisfactory. Greater or lesser amounts can be used.

A PMD-rich extract may be obtained from PMD-containing material, such as the leaves of a eucalyptus plant. A preferred source of PMD-rich extract is obtained by stirring eucalyptus citriadora oil derived from the plant with dilute sulphuric acid (usually 5% sulphuric acid), as previously explained in our GB-A-2282534.

In order that the invention may be fully understood, the following Example is given by way of illustration only.

Example 1

Cis PMD MIC/MBC Determination

MIC - minimum inhibitory concentration. This is the concentration of PMD which prevents bacterial growth. A "+" indicates bacterial growth, whereas a "-" indicates that bacterial growth is prevented. Thus, for E. Coli below, the minimum inhibitory concentration is 0.25% PMD in 1.25% ethanol.

MBC - minimum bactericidal concentration. This is the concentration of PMD which kills the bacteria. A "✚" indicates live bacteria

are present. Therefore, for E. Coli, the minimum bactericidal concentration is 0.5% PMD in 2.5% ethanol i.e. the concentration immediately above that which does not kill the bacteria.

Cis PMD was dissolved in Absolute Ethanol (0.2 g/ml) to give 20% solution. This was further diluted in water to give 10% in 50% EtOH. 200 µl was added to 0.8 ml Iso-sensitest broth to give a 2% solution in 10% EtOH. Serial 2-fold dilutions in ISB were then carried out and 20 µl E.coli (McFarlane 0.5) were added to each tube and incubated overnight at 37°C. After 18 hours, tubes showing no growth were sub-cultured.

Percentage Concentrations						
Sample	2	1	0.5	0.25	0.125	0.06
E.coli	-	-	-	- +	+ +	+ +
S.aureus (oxford)	-	-	- +	+ +	+ +	+ +
P.aeruginosa	-	-	- +	+ +	+ +	+ +
MRSA 15	-	-	- +	+ +	+ +	+ +
MRSA 16	-	-	- +	+ +	+ +	+ +
S.pyogenes	-	-	-	- +	+ +	+ +
Alcohol concentration	10%	5%	2.5%	1.25%	0.6%	0.3%
Control: Alcohol only /E.coli		+	+	+	+	+

Example 2

A composition of the invention for application to sanitise a surface was made up: by dissolving Citriodiol in a mixture of cyclohexanane (40%) and Exxol D (59%). The composition was applied by electrostatic deposition and by non-electrostatic spraying, to provide a thin antiseptic covering on various surfaces (human skin and work surfaces). The amounts of Citriodiol were varied to provide from about 0.5% to 5.00% PMD. Good antiseptic properties were obtained.

Example 3

A composition of the invention for application to sanitise a surface was made by dissolving Citriodiol in a mixture of:

*	Downal PnB (20%)	667 ml
**	Isopar L (44%)	1473 ml
	Stalox 60 (6%)	194 ml

*Dowanol is a glycol ether/ether acetate solvent.

** Isopar is an isoparaffinic solvent.

The amount of Citriodiol was initially 1000 ml of 30% Citriodiol but other amounts can also be used.

The solution was sprayed electrostatically and non-electrostatically onto various surfaces, e.g. the hands, planar work surfaces, etc. with very satisfactory results.

Example 4

A simple hair shampoo of sodium lauryl ether sulphate (10%) dispersed in water (90%) was mixed with 2% PMD to provide antiseptic properties in the shampoo. Other shampoos, including medicated shampoos for dandruff treatment, can also have PMD incorporated therein to provide an antiseptic, or enhanced antiseptic, effect.

Example 5

Standard proprietary toilet soap formulations can be modified by the inclusion of from ½ to 5% PMD therein to provide an antiseptic or enhanced antiseptic effect. In general, it is not necessary to use more than 5% PMD but greater amounts can be used if desired.

Example 6

A dermatological cream base of composition

	%
sodium citrate	1
cetyl alcohol	2

stearyl alcohol	3
glycerine	12
sodium lauryl sulphate	5
parabens	0.3
petrolatum album to	100%

can be modified in accordance with the invention by including up to about 5% PMD therein to provide antiseptic properties therein.

Example 7

Aqueous nose drops made from a basic aqueous nose drop composition, e.g.

sodium hyaluronate	0.01g
sodium cromoglycate	1.0g
sterile purified water to	100 ml
acid to pH	5.0

can be modified in accordance with the invention to include PMD therein, e.g. 0.5% - 1%, to impart a further antiseptic effect.

Example 8

Standard antiseptic solutions can have their effect enhanced by including therein PMD, in accordance with the invention. The PMD may be added to the standard solutions, or it may be used as a replacement for another antiseptic therein. Antiseptic solutions are generally fairly complex mixtures of antimicrobials, surfactants and solvents, but PMD can be formulated relatively simply in a suitable solvent to provide antiseptic properties.

Example 9

Sterile antiseptic solutions for use internally on the human body, for example in wound sites during surgery, can be made using PMD in place of or in addition to other antiseptics. Such solutions are very effective for wound treatment or ensure antisepsis.

Example 10

Sterile surgical scrubs can be made including PMD as the, or one of the, antiseptics. For example, PMD may be included in a known scrub such as Hibitane which comprises a detergent base of polyoxyethylene-polyoxypropylene block polymer (a nonionic surfactant) and dimethyllauryl amine oxide (an amphoteric surfactant), and chlorhexidine digluconate as the antiseptic. In general, PMD can be used with, or in place of, known antiseptics such as chlorhexidine and others, as will be clear to those skilled in the art.

CLAIMS:

1 The use of p-menthane-3,8-diol (PMD) as an antiseptic, antibiotic, fungicide or bactericide.

2 The use of PMD according to claim 1, as an antiseptic against strains of *Staph. aureus*.

3 The use according to claim 1 or 2, wherein the PMD is a crude or purified natural product.

4 The use according to claim 3, wherein the PMD is in the form of a PMD-rich extract from lemon eucalyptus oil.

5 The use according to claim 1 or 2, wherein the PMD is in the form of a mixture of isomers thereof.

6 An antiseptic, antibiotic, fungicidal or bactericidal composition which comprises PMD and a carrier therefor.

7 A composition according to claim 6, wherein the carrier is an oil or an organic solvent.

8 A composition according to claim 7, wherein the carrier is a mixture of water and an organic solvent miscible therewith.

9 A composition according to claim 6, 7 or 8, wherein the PMD is as defined in any of claims 3, 4 and 5.

10 A composition according to claim 6, 7, 8 or 9 which is a household detergent, cleansing or cream composition.

11 A composition according to claim 6, 7, 8 or 9, which is in a form suitable for medical use.

12 A composition according to claim 11, which is in the form of a throat lozenge or pastille, a shampoo, a skin spray, a nasal spray, or in a form for wound irrigation.

13 A method of sanitizing a surface which comprises applying PMD thereto.

14 A method according to claim 13, wherein a composition as claimed in any of claims 6 to 11 is applied to the surface.

15 A method according to claim 13 or 14, wherein the PMD or PMD composition is applied by spraying.

16 A method according to claim 13, wherein the PMD or PMD composition is applied by electrostatic deposition.

17 A method according to claim 13, wherein the surface is of a human hand or of a glove therefor.

18 An article which contains or comprises PMD such that, in use of the article for its intended purpose, the PMD provides an antiseptic, antibiotic, fungicidal or bactericidal effect.

19 An article according to claim 18, which comprises a fabric impregnated with PMD, or a plastics article impregnated with PMD.

20 The use of PMD for application to a surface to sanitise the surface by virtue of its antiseptic properties.

21 The use according to claim 20, where the surface is on the wall, floor, ceiling or other structural part of a room or building; or an equipment or apparatus; or is a work surface.

22 The use according to claim 20, wherein the surface is in or on the body including skin, open wounds and nasal and other passages.

23 The use according to claim 22, wherein the surface is on the hands.

24 The use of PMD in a household product such as a detergent, cleanser or cream to provide antiseptic properties.

25 A sterile surgical scrub solution which comprises PMD as the or one of the antiseptics therein.

INTERNATIONAL SEARCH REPORT

Interr. ial Application No
PCT/GB 00/02825

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A01N31/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, EPO-Internal, PAJ, CHEM ABS Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 282 534 A (CLARKE PAUL DOUGLAS) 12 April 1995 (1995-04-12) cited in the application the whole document	1-25
A	NISHIMURA, HIROYUKI ET AL: "Microbial transformation of monoterpenes: flavor and biological activity" ACS SYMP. SER. (1996), 637(BIOTECHNOLOGY FOR IMPROVED FOODS AND FLAVORS), , pages 173-187, XP002148480 the whole document	1-25

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
4 October 2000	20/10/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Bertrand, F

2

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

information on patent family members

Inter ial Application No
PCT/GB 00/02825

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2282534 A	12-04-1995	NONE	

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION** see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
CPW/19660		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/GB 00/ 02825	21/07/2000	21/07/1999
Applicant		
CLARKE, Paul, Douglas		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language,** the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   [ ] the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

   [ ] contained in the international application in written form.

   [ ] filed together with the international application in computer readable form.

   [ ] furnished subsequently to this Authority in written form.

   [ ] furnished subsequently to this Authority in computer readble form.

   [ ] the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   [ ] the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. [ ] **Certain claims were found unsearchable** (See Box I).

3. [ ] **Unity of invention is lacking** (see Box II).

4. With regard to the **title,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established by this Authority to read as follows:

5. With regard to the **abstract,**

   [ ] the text is approved as submitted by the applicant.

   [X] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from th date of mailing of this international search report, submit comm nts to this Authority.

6. The figure of th **drawings** to be published with th abstract is Figure No. _____

   [ ] as suggested by the applicant.

   [ ] because th applicant failed to suggest a figure.

   [ ] because this figure better charact rizes th invention.

   [X] Non of th figures.

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

p-Menthane-3,8-diol (PMD) has antiseptic, antibiotic, fungicidal and bactericidal properties. It is used for these purposes in the form of compositions comprising the PMD and a carrier.

INTERNATIONAL SEARCH REPORT

International Application No
[redacted]GB 00/02825

A. CLASSIFICATION OF SUBJECT MATTER
IPC·7 A01N31/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, EPO-Internal, PAJ, CHEM ABS Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 282 534 A (CLARKE PAUL DOUGLAS) 12 April 1995 (1995-04-12) cited in the application the whole document ---	1-25
A	NISHIMURA, HIROYUKI ET AL: "Microbial transformation of monoterpenes: flavor and biological activity" ACS SYMP. SER. (1996), 637(BIOTECHNOLOGY FOR IMPROVED FOODS AND FLAVORS), , pages 173-187, XP002148480 the whole document -----	1-25

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
4 October 2000	20/10/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Bertrand, F

2

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/GB 00/02825

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2282534 A	12-04-1995	NONE	

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference *(if desired) (12 characters maximum)* CPW/19660

Box No. I TITLE OF INVENTION

ANTISEPTIC COMPOSITION

Box No. II APPLICANT

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

CLARKE, Paul Douglas
29 Harley Street
London
W1N 1DA

☒ This person is also inventor.

Telephone No.

Facsimile No.

Teleprinter No.

State *(that is, country)* of nationality: GB

State *(that is, country)* of residence: GB

This person is applicant for the purposes of: ☒ all designated States ☐ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

This person is:

☐ applicant only

☐ applicant and inventor

☐ inventor only *(If this check-box is marked, do not fill in below.)*

State *(that is, country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: ☒ agent ☐ common representative

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

WAIN Christopher Paul
A A Thornton & Co
235 High Holborn
London WC1V 7LE
GB

Telephone No. 01604 638242

Facsimile No. 01604 638164

Teleprinter No.

☐ **Address for correspondence:** Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No.V DESIGNATION OF STATES

The following designations are hereby mad[redacted]r Rule 4.9(a) *(mark the applicable check-boxes: a[redacted] one must be marked)*:

Regional Patent

- [ ] AP **ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- [X] EA **Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- [X] EP **European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- [X] OA **OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT *(if other kind of protection or treatment desired, specify on dotted line)* .....

National Patent *(if other kind of protection or treatment desired, specify on dotted line)*:

- [X] AE United Arab Emirates
- [X] AG Antigua and Barbuda
- [X] AL Albania .....
- [X] AM Armenia .....
- [X] AT Austria .....
- [X] AU Australia .....
- [X] AZ Azerbaijan
- [X] BA Bosnia and Herzegovina .....
- [X] BB Barbados
- [X] BG Bulgaria .....
- [X] BR Brazil .....
- [X] BY Belarus .....
- [X] BZ Belize
- [X] CA Canada
- [X] CH and LI Switzerland and Liechtenstein
- [X] CN China .....
- [X] CR Costa Rica .....
- [X] CU Cuba .....
- [X] CZ Czech Republic .....
- [X] DE Germany .....
- [X] DK Denmark .....
- [X] DM Dominica
- [X] DZ Algeria .....
- [X] EE Estonia .....
- [X] ES Spain .....
- [X] FI Finland .....
- [X] GB United Kingdom
- [X] GD Grenada
- [X] GE Georgia .....
- [X] GH Ghana .....
- [X] GM Gambia
- [X] HR Croatia .....
- [X] HU Hungary .....
- [X] ID Indonesia
- [X] IL Israel .....
- [X] IN India .....
- [X] IS Iceland
- [X] JP Japan .....
- [X] KE Kenya .....
- [X] KG Kyrgyzstan .....
- [X] KP Democratic People's Republic of Korea .....
- [X] KR Republic of Korea .....
- [X] KZ Kazakhstan .....
- [X] LC Saint Lucia
- [X] LK Sri Lanka
- [X] LR Liberia
- [X] LS Lesotho .....
- [X] LT Lithuania
- [X] LU Luxembourg
- [X] LV Latvia
- [X] MA Morocco .....
- [X] MD Republic of Moldova .....
- [X] MG Madagascar .....
- [X] MK The former Yugoslav Republic of Macedonia .....
- [X] MN Mongolia
- [X] MW Malawi .....
- [X] MX Mexico .....
- [X] MZ Mozambique
- [X] NO Norway
- [X] NZ New Zealand .....
- [X] PL Poland .....
- [X] PT Portugal .....
- [X] RO Romania
- [X] RU Russian Federation .....
- [X] SD Sudan
- [X] SE Sweden
- [X] SG Singapore
- [X] SI Slovenia .....
- [X] SK Slovakia .....
- [X] SL Sierra Leone .....
- [X] TJ Tajikistan .....
- [X] TM Turkmenistan .....
- [X] TR Turkey .....
- [X] TT Trinidad and Tobago .....
- [X] TZ United Republic of Tanzania
- [X] UA Ukraine .....
- [X] UG Uganda .....
- [X] US United States of America .....
- [X] UZ Uzbekistan .....
- [X] VN Viet Nam .....
- [X] YU Yugoslavia .....
- [X] ZA South Africa .....
- [X] ZW Zimbabwe .....

Check-box reserved for designating States which have become party to the PCT after issuance of this sheet:

- [ ] .....

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. *(Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)*

Supplemental Box *If the Supplemental Box is not used, this sheet should not be included in the request.*

1. If, in any of the Boxes, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No. ..." [indicate the number of the Box] and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:

(i) if more than two persons are involved as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;

(ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;

(iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;

(iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;

(v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;

(vi) if, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI;

(vii) if, in Box No. VI, the earlier application is an ARIPO application: in such case, write "Continuation of Box No. VI", specify the number of the item corresponding to that earlier application and indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed.

2. If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.

3. If the applicant claims, in respect of any designated Office, the benefits of provisions of the national law concerning non-prejudicial disclosures or exceptions to lack of novelty: in such case, write "Statement concerning non-prejudicial disclosures or exceptions to lack of novelty" and furnish that statement below.

CONTINUATION OF BOX NO. IV

Further agents of A.A. Thornton & Co., 235 High Holborn, London, WC1V 7LE, United Kingdom, who have been appointed to act on behalf of the applicants before the competent International Authorities are:

CRAWFORD, Andrew Birkby,
HARRISON, Philippa Dinah,
LERWILL, John,
GOODENOUGH, Nigel,
CURTIS, Philip Anthony,
BUTCHER, Ian James.

Box No. VI PRIORITY CLAIM ☐ Further priority claims indicated in the Supplemental Box.

Filing date of earlier application (day.month.year)	Number of earlier application	Where earlier application is: national application: country	regional application:* regional Office	international application: receiving Office
item (1) 21/07/99	9917040.9	GB		
item (2)				
item (3)				

☒ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) *(only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office)* identified above as item(s): ONE

* *Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.*

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) *(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used)* : ISA / EP

Request to use results of earlier search; reference to that search *(if an earlier search has been carried out by or requested from the International Searching Authority)*:

Date *(day/month/year)* Number Country *(or regional Office)*

Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following **number of sheets**:

request	: 4
description (excluding sequence listing part)	: 11
claims	: 3
abstract	: 1
drawings	: -
sequence listing part of description	: -
Total number of sheets	: 19

This international application is **accompanied by** the item(s) marked below:

1. ☒ fee calculation sheet
2. ☐ separate signed power of attorney
3. ☐ copy of general power of attorney; reference number, if any:
4. ☐ statement explaining lack of signature
5. ☐ priority document(s) identified in Box No. VI as item(s):
6. ☐ translation of international application into (language):
7. ☐ separate indications concerning deposited microorganism or other biological material
8. ☐ nucleotide and/or amino acid sequence listing in computer readable form
9. ☐ other *(specify)*:

Figure of the drawings which should accompany the abstract: -

Language of filing of the international application: ENGLISH

Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

.....

WAIN, Christopher Paul

For receiving Office use only

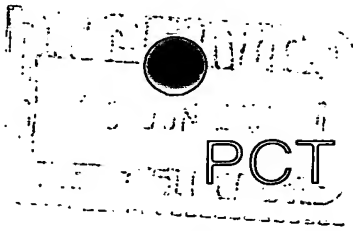
1. Date of actual receipt of the purported international application:
2. Drawings: ☐ received: ☐ not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:
4. Date of timely receipt of the required corrections under PCT Article 11(2):
5. International Searching Authority (if two or more are competent): ISA /
6. ☐ Transmittal of search copy delayed until search fee is paid.

For International Bureau use only

Date of receipt of the record copy by the International Bureau:

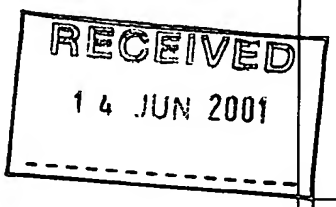
PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY



To:

WAIN, Christopher Paul et al.
A A THORNTON & CO
235 High Holborn
London WC1V 7LE
GRANDE BRETAGNE



NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Rule 71.1)

	Date of mailing *(day/month/year)* 12.06.2001
Applicant's or agent's file reference CPW/19660	**IMPORTANT NOTIFICATION**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/GB00/02825	21/07/2000	21/07/1999

Applicant
CLARKE, Paul Douglas

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/	Authorized officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Gallego, A Tel.+49 89 2399-8102

Form PCT/IPEA/416 (July 1992)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
CPW/19660		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/GB00/02825	21/07/2000	21/07/1999
International Patent Classification (IPC) or national classification and IPC A01N31/06		
Applicant CLARKE, Paul Douglas		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
10/01/2001	12.06.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Bertrand, F Telephone No. +49 89 2399 8606

Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/02825

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:
Description, pages:

1-11 as originally filed

Claims, No.:

1-25 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:
see separate sheet

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-5,13-17,19-24
	No:	Claims	6-12,18,25
Inventive step (IS)	Yes:	Claims	1-5,13-17,19-24
	No:	Claims	6-12,18,25
Industrial applicability (IA)	Yes:	Claims	6-12,18,19,21,24,25
	No:	Claims	(1-5,13-17,20,22,23 ?)

2. Citations and explanations
see separate sheet

Re Item I

Basis of the report

The documents mentioned in this International Preliminary Examination Report are numbered in accordance with the order they appear in the International Search Report.

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Claims 1-5, 13-17, 20, 22 and 23 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT). The subject-matter of the remaining claims is considered to be susceptible of industrial application.

The present application relates to PMD and its use as antiseptic, antibiotic, fungicide and bactericide. PMD is known from D1 and D2 which both state its insect-repelling properties, but do not mention any possible use as antiseptic, antibiotic, fungicide and bactericide. However, an alcoholic solution of PMD is mentioned in D1. Bearing in mind that the intended use and effects of a compound or composition is not a technical feature in claims of the product category, claims 6, 10 and 11 are considered to relate to any composition containing PMD and a carrier, claim 18 to any article containing PMD, claim 20 is considered to relate to any fabric or plastic article impregnated with PMD and claim 25 is considered to relate to any solution containing PMD. Thus, the present application does not meet the requirements of Article 33(2) PCT, insofar as the subject-matter of the present claims 6-12, 18 and 25 is not new with respect to the prior art as defined in Rule 64(1) to (3) PCT.

The subject-matter of the remaining claims is considered to be new and also to involve an inventive step (Article 33(3) PCT).